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An additional record for the rare Black-Shouldered Opossum *Caluromysiops irrupta* Sanborn, 1951 (Didelphimorphia: Didelphidae) in Northwestern Brazil

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Abstract: *Caluromysiops irrupta* Sanborn, 1951 is a poorly known didelphid marsupial species, currently known from nine localities in south-central and western Amazonia. Only two records of *C. irrupta* were known from Brazil. Here we report the third record, in Rondônia state, northwestern Brazil. The specimen was sighted in a well-preserved forest area, in the Parque Estadual Guajará Mirim, Guajará Mirim, Rondônia. Although this record does not represent a distribution extension, it represents an additional record for a very poorly known species.

Key words: conservation; distribution; Guajará Mirim; new record; Rondônia.

The Black-shouldered Opossum, *Caluromysiops irrupta* Sanborn, 1951 (Didelphimorphia: Didelphidae), is a poorly known species, recorded so far in only nine localities in south-central and western Amazonia. It is currently considered critically endangered in Brazil (MMA 2014), based on the fact that until recently (Barbosa et al. 2015) its presence in Brazil was known from a single specimen collected in the 1960s (Vivo and Gomes 1990). The scarce information available indicates its distribution is restricted to Amazonian lowland mature tropical humid forests, below 700 m (Emmons 2008; Astúa 2015). Very little is known of its ecology (Janson et al. 1981) and part of the available information comes from captive specimens kept in zoos (Izor and Pine 1987). As most didelphids, they are considered nocturnal, having been seen only at night in the wild (Emmons 2008). Black-shouldered opossums are thought to be primarily slow-moving canopy-dwellers (Emmons 2008; Astúa 2015) and are apparently locally uncommon (Emmons 1984).

Only two records of *C. irrupta* were known from Brazil. The first is a skin with no skull from the upper Rio Jarú, Rondônia, collected in 1964 and currently housed in the Museu de Zoologia da Universidade de São Paulo (Vivo and Gomes 1989). It is also the only voucher recorded for the species in Brazil (MZUSP 11681). For 50 years this specimen remained the sole known record of the species in Brazil until Barbosa et al. (2015) reported a new specimen, captured, photographed and released in Paranaíta, Mato Grosso state, which extended the known distribution over 700 km eastwards.

Here we report on an additional specimen representing the third known record for the species for Brazil. Although made over 20 years ago, it was not formally reported until now.

The photographed specimen (Figure 1) was spotted on vegetation between 18:00 and 20:00 h, ca. 26–28 March 1995, at approximately 3 m above the ground. It was found in a well-preserved forest area (the sighting was along an unpaved road that crossed primary forest), at the Parque Estadual Guajará Mirim (10°19′46.25″ S, 064°33′6.91″ W), municipality of Guajará Mirim, Rondônia, Brazil.

The specimen was only sighted and photographed. Therefore there is no voucher, associated biometric or sex information. However, it could be unambiguously identified due to the unique color pattern of its fur, frosted grayish brown, fading to buffy or whitish on sides and entire head, with unique and distinct large black patches covering forearms from shoulders down

Figure 1. Photographs of a specimen of *Caluromysiops irrupta* taken at Parque Estadual Guajará Mirim, Guajará Mirim, Rondônia state (Locality 10, Figure 2), Brazil, in March 1995. The species can be easily identified on the basis of its distinctive fur pattern (see text for details). Photos by M. Martins.

to inner forearms and wrists, and joining along the mid-dorsum and running along the back, eventually fading to the overall fur color on the rump or along the tail (Emmons 2008; Astúa 2015). All these features are evident in the photographic records and are not found in any other didelphid species (Figure 1).

Although this record does not represent a distribution extension, as it is located ca. 175 km NW of the only voucher recorded in Brazil (Figure 2, Locality 8), it is noteworthy as it represents an additional record for a very poorly known species (now known from 10 localities). This record also supports earlier data on its arboreal and nocturnal or crepuscular habits, and confirms its presence in the time frame between the first record in 1964, by Vivo and Gomes (1989), and the most recent record, in 2013 (Barbosa et al. 2015).

Existing data on habitat is as scarce as the records: older records indicate its presence in habitats reported as mature, tall forest on high ground, where *C. irrupta* uses both the canopy and the subcanopy (Terborgh et al. 1984). The presence of dense undergrowth has also been reported (Emmons 1984), and specimens have been seen foraging on *Quararibea cordata* trees (Janson et al. 1981) in unflooded forest. Our record was made on a primary forest, yet near an unpaved road, and the specimen reported by Barbosa et al. (2015) was seen in a secondary forest that nonetheless still had tall, high canopy trees. It seems that the presence of *Caluromysiops irrupta* is related to the presence of taller trees in either primary or secondary forest, given its preference of the canopy or subcanopy, although it might be seen at lower heights (as in the present record). The only record of *C. irrupta* on the ground is that of Barbosa et al. (2015), but that individual was captured while walking over recently fallen bamboos, in an area surrounded by recently cut trees (J.L.Barbosa, pers. comm.). It is thus likely that it had been on one of those fallen trees and was moving on the ground looking for new habitat.

Caluromysiops irrupta has been considered locally uncommon when different sites were sampled with similar methods (Emmons 1984), and a preference for higher strata might be related with the paucity of sightings and captures, making any inference on overall abundance or densities throughout its distribution range still premature.

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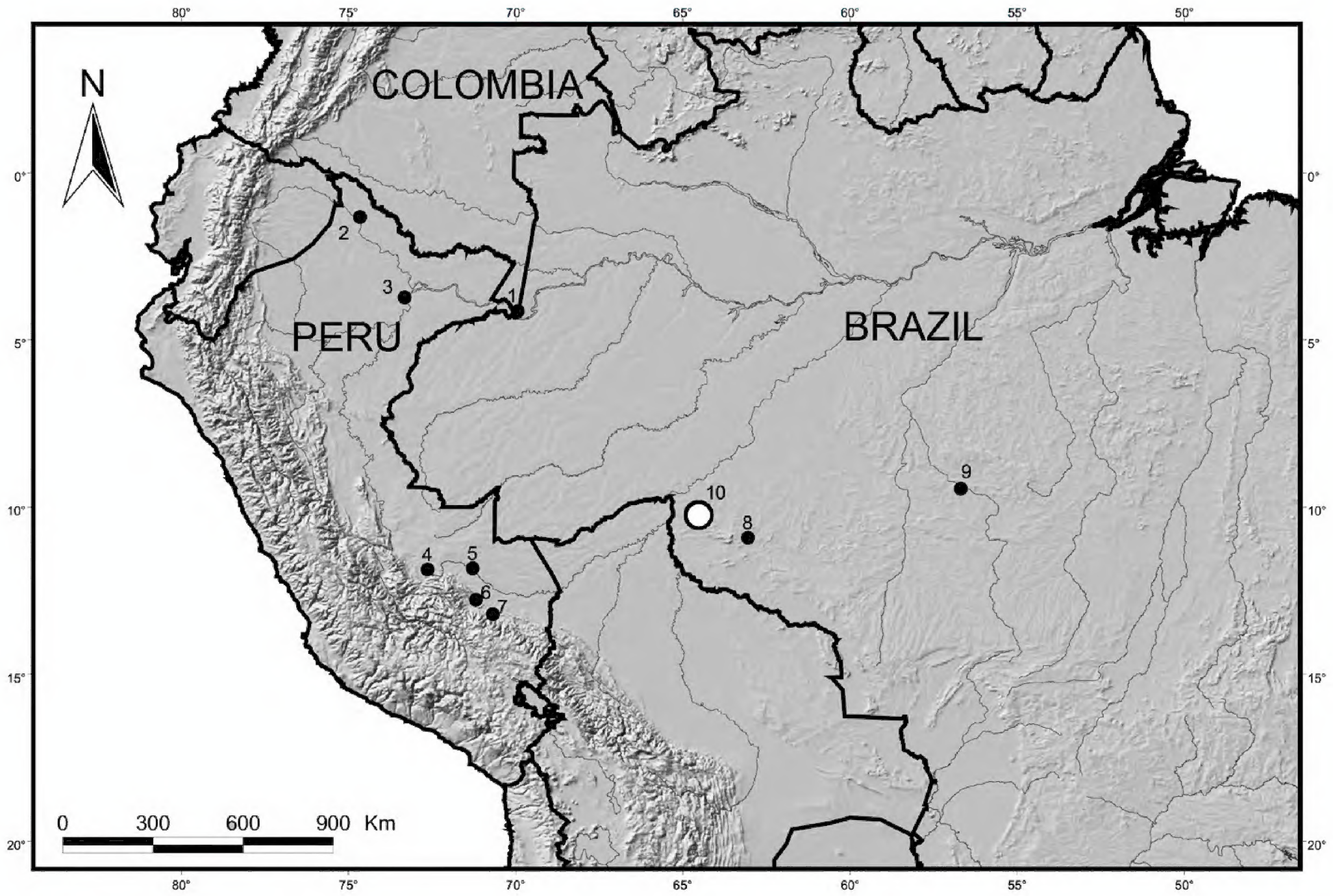

Figure 2. Geographic distribution of *Caluromysiops irrupta*. Black dots represent all records compiled by Barbosa et al. (2015), and the white dot the new record presented herein: Colombia: 1: Amazonas, Leticia (04°09′ S, 069°57′ W) (see, however, comments in Izor and Pine (1987) regarding this record). Peru: 2: Loreto, Río Santa María (01°20′ S, 074°40′ W). 3: Loreto, lower Río Nanay (03°45′ S, 073°20′ W). 4: Cusco, Pozo Cashiriari C (11°53′ S, 072°39′ W) 5: Madre de Dios, Cocha Cashu Biological Station (11°51′ S, 071°19′ W). 6: Madre de Dios, Itahuanía, Manu National Park (12°47′ S, 071°13′ W). 7: Cusco, Quince Mil, Province of Quispicanchis (13°13′ S, 070°42′ W). Brazil: 8: Rondônia, Rio Jarú (10°56′ S, 063°04′ W). 9: Mato Grosso, Paranaíta, Paranaíta River (9°28′12″ S, 056°42′29″ W). 10. Parque Estadual Guajará Mirim (10°19′46.25″ S, 064°33′6.91″ W), Guajará Mirim, Rondônia.

LITERATURE CITED

Astúa, D. 2015. Family Didelphidae (Opossums); pp. 70–186, in: D. E. Wilson, and R.A. Mittermeier (eds). Handbook of the Mammals of the World, Volume 5, Monotremes and Marsupials. Barcelona: Lynx Editions.

Barbosa, J.L., R.J. Custódio and M.V. Brandão. 2015. Rediscovery and range extension of the Black-shouldered Opossum *Caluromysiops irrupta* Sanborn, 1951 (Didelphimorphia, Didelphidae) in Brazil. Mammalia 80(3): 1-4. doi: 10.1515/mammalia-2014-0147

Emmons, L.H. 1984. Geographic variation in densities and diversities of non-flying mammals in Amazonia. Biotropica 16: 210–222. http://www.jstor.org/stable/2388054

Emmons, L.H. 2008. Genus *Caluromysiops* Sanborn, 1951; pp. 11–12, in: A.L. Gardner (ed). Mammals of South America. Chicago: University of Chicago Press.

Izor, R.J. and R.H. Pine. 1987. Notes on the Black-shouldered opossum, *Caluromysiops irrupta*. Fieldiana: Zoology (n.s) 39: 117–124. http://www.biodiversitylibrary.org/item/25992#page/127/mode/thumb

Janson, C.H., J. Terborgh and L.H. Emmons. 1981. Non-flying mammals as pollinating agents in the Amazonian forest. Reproductive Botany: 1–6. http://www.jstor.org/stable/2388065

MMA (Ministério do Meio Ambiente). 2014. Lista Nacional Oficial de Espécies da Fauna Ameaçadas de Extinção. Portaria 444, de 17 de dezembro de 2014. Diário Oficial da União, 17 de dezembro de 2014. Accessed at http://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?jornal=1&pagina=121&data=18/12/2014, 25 May 2016.

Sanborn, C.C. 1951. Two new mammals from Southern Peru. Fieldiana: Zoology 31: 117–124. http://www.biodiversitylibrary.org/part/10068

Terborgh, J.W., J.W. Fitzpatrick and L. Emmons. 1984. Annotated checklist of bird and mammals species of Cocha Cashu Biological Station, Manu National Park, Peru. Fieldiana: Zoology (n.s) 21: 1–29. doi: 10.5962/bhl.title.3167

Vivo, M. and N.F. Gomes. 1989. First record of *Caluromysiops irrupta* Sanborn, 1951 (Didelphidae) from Brazil. Mammalia 53: 310–311. doi: 10.1515/mamm.1989.53.2.307

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